WHAT IS CLAIMED IS:

1. A method for coordinating operation of packet-based audio devices comprising:

discovering a plurality of packet-based audio devices within an acoustic space;

initializing the packet-based audio devices to participate in a communication session;

generating an output stream comprising a plurality of packets each including digitally encoded audio;

calculating a time for play out of a selected one of the packets;

providing the output stream to the packet-based audio devices; and

commanding each of the packet-based audio devices to output the audio from the selected packet at the calculated time.

2. The method of Claim 1, wherein commanding the packet-based audio devices to output the audio from the selected packet at the calculated time comprises embedding instructions within a field of the selected packet, the instructions specifying the calculated time.

3. The method of Claim 1, wherein commanding the packet-based audio devices to output the audio from the selected packet at the calculated time comprises:

generating a command packet separate from the output stream, the command packet identifying a sequence number of the selected packet and the calculated time; and

communicating the command packet to the packet-based audio devices.

4. The method of Claim 1, wherein initializing the packet-based audio devices to participate comprises commanding each of the packet-based audio devices to synchronize clocks with a central network time server.

5. The method of Claim 1, further comprising commanding each of the packet-based audio devices to output audio at a particular volume level.

6. The method of Claim 1, further comprising:

receiving a volume change indication from one of the packet-based audio devices, the volume change indication specifying a volume level; and

communicating a command to all other ones of the packet-based audio devices, the command specifying the volume level.

7. The method of Claim 1, further comprising:

receiving input streams from each of the packet-based audio devices, each of the input streams comprising a plurality of packets each including digitally encoded audio;

selecting one of the input streams;

generating a second output stream using the selected input stream; and

communicating the second output stream to participants in the communication session outside of the acoustic space.

8. The method of Claim 1, further comprising:

determining an algorithmic delay for each of the packet-based audio devices, the algorithmic delay indicating a time delay from receiving a packet to providing play out of audio from the received packet; and

calculating the time for play out of the selected one of the packets based on the algorithmic delays from the packet-based audio devices.

9. The method of Claim 1, further comprising removing one of the packet-based audio devices from the communication session before completion of the communication session based upon measured network conditions.

10. An apparatus for coordinating operation of packet-based audio devices comprising:

an interface operable to communicate with a plurality of packet-based audio devices within an acoustic space;

a media module operable to generate an output stream comprising a plurality of packets each including digitally encoded audio; and

a controller operable to initialize the packet-based audio devices to participate in a communication session, to calculate a time for play out of a selected one of the packets, to provide the output stream to the packet-based audio devices, and to command each of the packet-based audio devices to output the audio from the selected packet at the calculated time.

11. The apparatus of Claim 10, wherein the controller is further operable to command the packet-based audio devices to output the audio from the selected packet at the calculated time by embedding instructions within a field of the selected packet, the instructions specifying the calculated time.

12. The apparatus of Claim 10, wherein the controller is further operable to command the packet-based audio devices to output the audio from the selected packet at the calculated time by:

generating a command packet separate from the output stream, the command packet identifying a sequence number of the selected packet and the calculated time; and

communicating the command packet to the packet-based audio devices.

13. The apparatus of Claim 10, where the controller is further operable to initialize the packet-based audio devices to participate by commanding each of the packet-based audio devices to synchronize clocks with a central network time server.

14. The apparatus of Claim 10, wherein the controller is further operable to command each of the packet-based audio devices to output audio at a particular volume level.

15. The apparatus of Claim 10, wherein the controller is further operable to:

receive a volume change indication from one of the packet-based audio devices, the volume change indication specifying a volume level; and

communicate a command to all other ones of the packet-based audio devices, the command specifying the volume level.

16. The apparatus of Claim 10, wherein:

the interface is further operable to receive input streams from each of the packet-based audio devices, each of the input streams comprising a plurality of packets each including digitally encoded audio;

the media module is further operable to select one of the input streams, to generate a second output stream using the selected input stream, and to communicate the second output stream to participants in the communication session outside of the acoustic space using the interface.

17. The apparatus of Claim 10, wherein the controller is further operable to:

determine an algorithmic delay for each of the packet-based audio devices, the algorithmic delay indicating a time delay from receiving a packet to providing play out of audio from the received packet; and

calculate the time for play out of the selected one of the packets based on the algorithmic delays from the packet-based audio devices.

18. The apparatus of Claim 10, wherein the controller is further operable to remove one of the packet-based audio devices from the communication session before completion of the communication session based upon measured network conditions.

19. Logic for coordinating operation of packet-based audio devices, the logic encoded in media and operable when executed to:

discover a plurality of packet-based audio devices within an acoustic space;

initialize the packet-based audio devices to participate in a communication session;

generate an output stream comprising a plurality of packets each including digitally encoded audio;

calculate a time for play out of a selected one of the packets;

provide the output stream to the packet-based audio devices; and

command each of the packet-based audio devices to output the audio from the selected packet at the calculated time.

20. The logic of Claim 19, further operable to command the packet-based audio devices to output the audio from the selected packet at the calculated time by embedding instructions within a field of the selected packet, the instructions specifying the calculated time.

21. The logic of Claim 19, further operable to command the packet-based audio devices to output the audio from the selected packet at the calculated time by:

generating a command packet separate from the output stream, the command packet identifying a sequence number of the selected packet and the calculated time; and

communicating the command packet to the packet-based audio devices.

22. The logic of Claim 19, wherein initializing the packet-based audio devices to participate comprises commanding each of the packet-based audio devices to synchronize clocks with a central network time server.

23. The logic of Claim 19, further operable to command each of the packet-based audio devices to output audio at a particular volume level.

24. The logic of Claim 19, further operable to perform the steps of:

receiving a volume change indication from one of the packet-based audio devices, the volume change indication specifying a volume level; and

communicating a command to all other ones of the packet-based audio devices, the command specifying the volume level.

25. The logic of Claim 19, further operable to perform the steps of:

receiving input streams from each of the packet-based audio devices, each of the input streams comprising a plurality of packets each including digitally encoded audio;

selecting one of the input streams;

generating a second output stream using the selected input stream; and

communicating the second output stream to participants in the communication session outside of the acoustic space.

26. The logic of Claim 19, further comprising:

determining an algorithmic delay for each of the packet-based audio devices, the algorithmic delay indicating a time delay from receiving a packet to providing play out of audio from the received packet; and

calculating the time for play out of the selected one of the packets based on the algorithmic delays from the packet-based audio devices.

27. The logic of Claim 19, further operable to remove one of the packet-based audio devices from the communication session before completion of the communication session based upon measured network conditions.

28. An apparatus for coordinating operation of packet-based audio devices comprising:

means for discovering a plurality of packet-based audio devices within an acoustic space;

means for initializing the packet-based audio devices to participate in a communication session;

means for generating an output stream comprising a plurality of packets each including digitally encoded audio;

means for calculating a time for play out of a selected one of the packets;

means for providing the output stream to the packet-based audio devices; and

means for commanding each of the packet-based audio devices to output the audio from the selected packet at the calculated time.

29. A method for coordinating operation of packet-based audio devices comprising:

discovering a plurality of packet-based audio devices within an acoustic space;

commanding each of the packet-based audio devices to synchronize clocks with a central network time server;

generating an output stream comprising a plurality of packets each including digitally encoded audio;

determining an algorithmic delay for each of the packet-based audio devices, the algorithmic delay indicating a time delay from receiving a packet to providing play out of audio from the received packet;

calculating a time for play out of a selected one of the packets based on the algorithmic delays from the packet-based audio devices;

providing the output stream to the packet-based audio devices;

commanding each of the packet-based audio devices to output the audio from the selected packet at the calculated time;

receiving input streams from each of the packet-based audio devices, each of the input streams comprising a plurality of packets each including digitally encoded audio;

selecting one of the input streams;

generating a second output stream using the selected input stream; and

communicating the second output stream to participants in the communication session outside of the acoustic space.